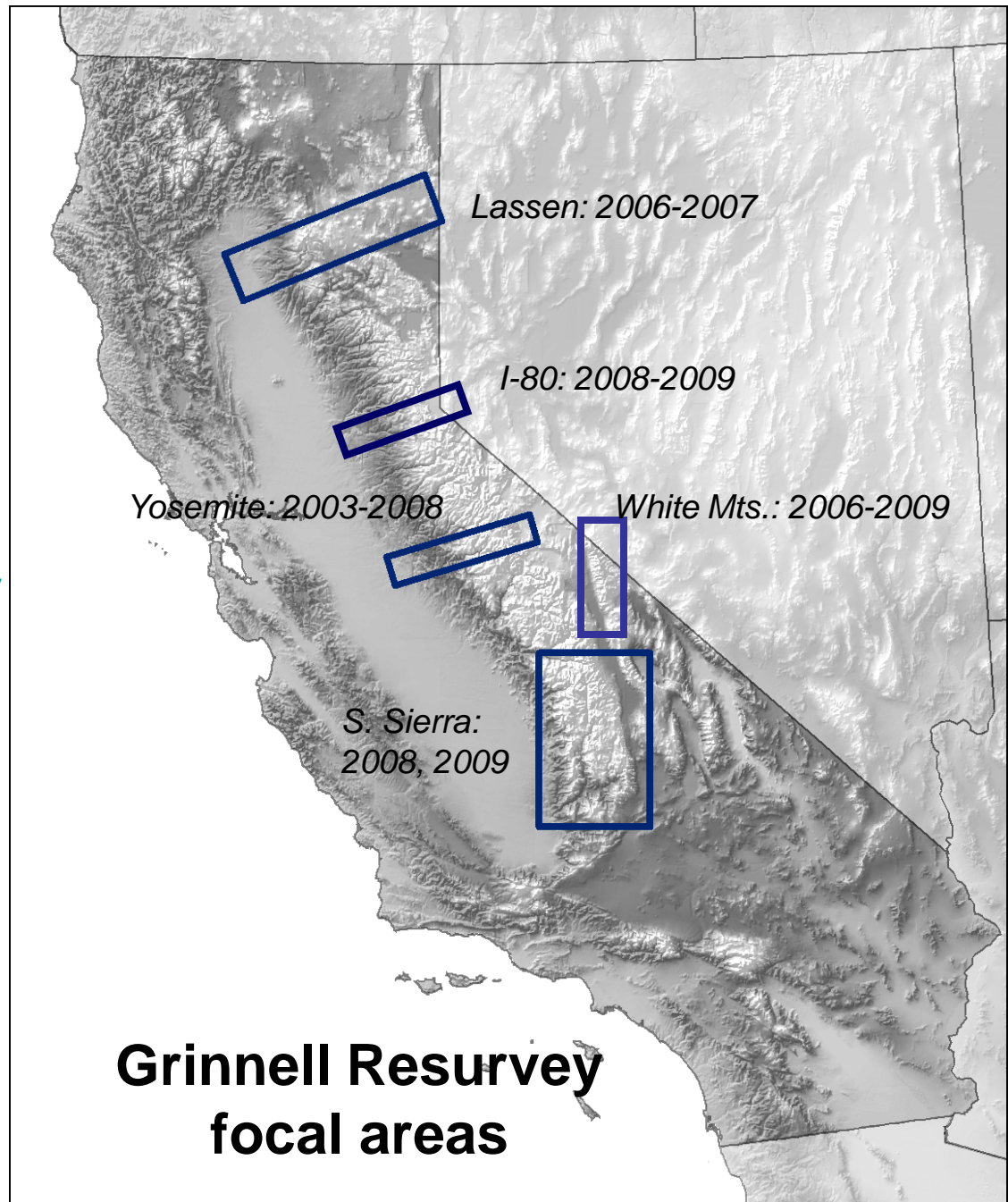


Grinnell's vision



Joseph Grinnell 1877 - 1939
MVZ Director 1908 - 1939

“... the greatest purpose of our museum... will not be realized until the lapse of many years, ***possibly a century***...and this is that the student of the future will have access to the original record of faunal conditions in California and the west, wherever we now work” (Grinnell, 1910).



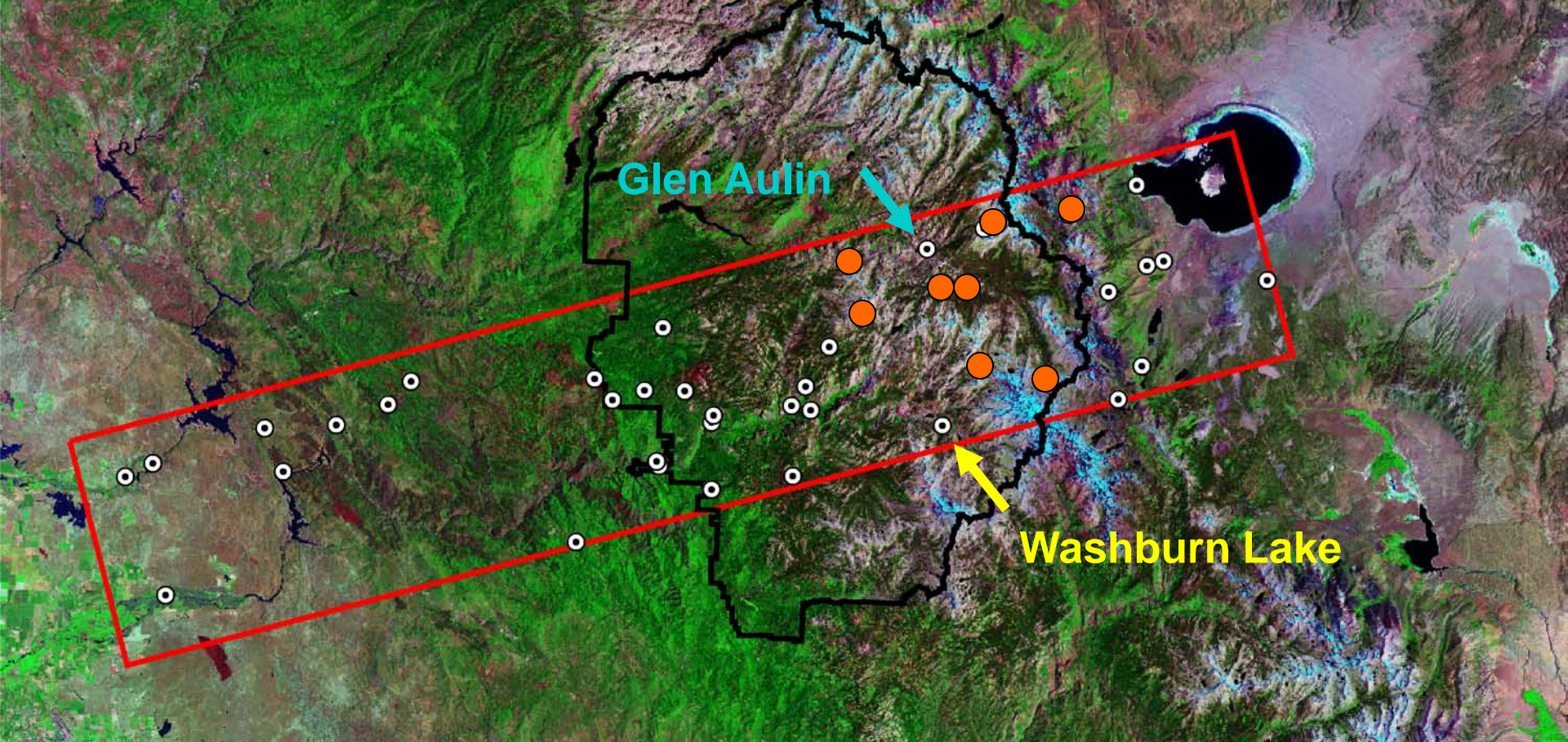
Pika - Yosemite transect Grinnell Resurvey Project

Grinnell era [1915-1916]

- pika recorded at 9 of 41 original “sites” at elevations ranging from 7800 to ~10,500 ft -- data either collected specimens or observations gleaned from field notes
- pika collected at 10 additional localities [all within same elevational range]
- unknown number of localities where pika were only observed -- these can be, but to date have not been, systematically gleaned from the fieldnotes

Resurvey [2003-2008]

- pika found at 8 of the 9 “sites” where observed/collected in Grinnell era -- apparently absent at one [Glen Aulin at 7800 ft]
- not resurveyed at a second 7800 ft locality where collected in Grinnell era [Washburn Lake]
- pika collected or observed at ~20 additional localities [between an elevation range of 8300 to 11,000 ft] - we made no attempt to survey all likely habitat when visiting an area or walking trails



WEST SLOPE

	Elevation
E. Fork Indian Canyon	6840
Mono Meadow	7110
1 mi E Merced Lake	7500
Glen Aulin [R-absent]	7800
Porcupine Flat	8250
Soda Springs [R-present]	8800
Fairview Dome [R-present]	9200
Ten Lakes [R-present]	9200
Young Lakes [R-present]	9930
Upper Lyell Canyon [R-present]	10200
Vogelsang Lake [R-present]	10350
Mt. Hoffman [NR* - 9300]	10500

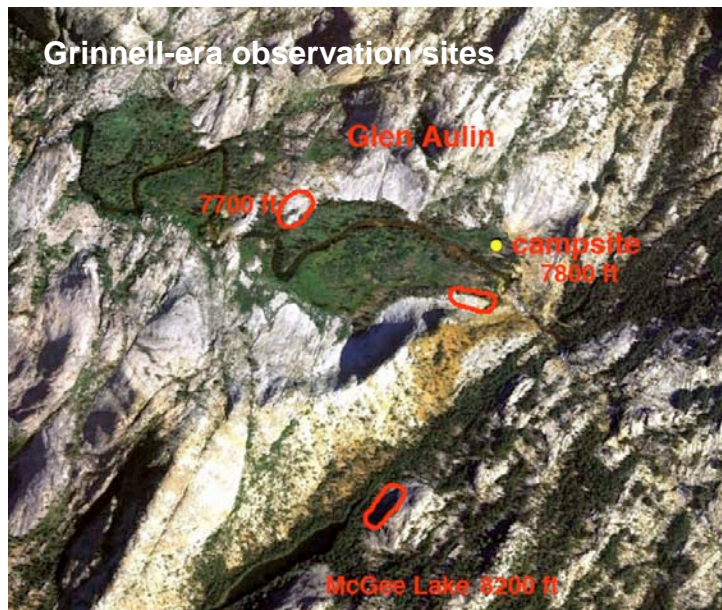
EAST SLOPE

	Elevation
Warren Fork [R-present]	9900
Gem lake [NR]	9170
Walker Lake	8500
Silver lake	7615
Mono Mills	7300
Williams Butte	7050
Farrington Ranch	6830
Mono Lake P.O.	6390

NR = not resurveyed

R = resurveyed

[elevation in meters]

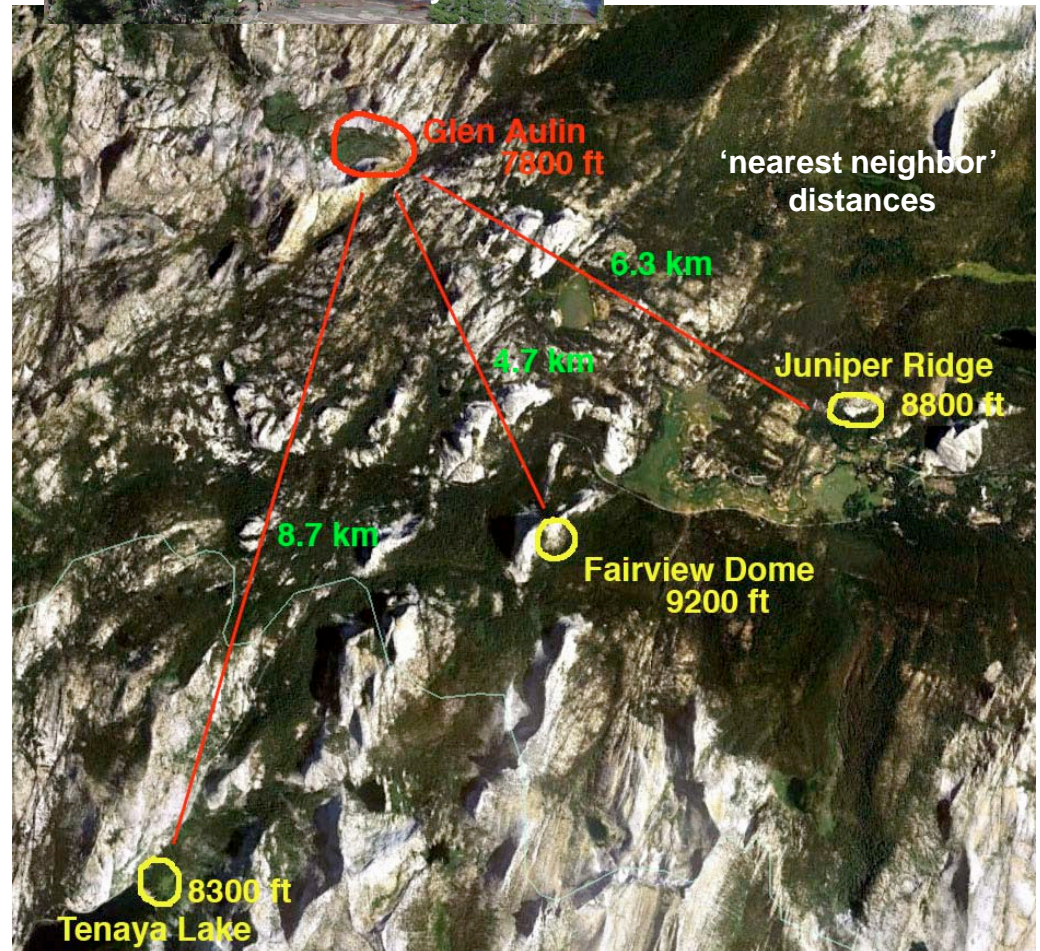


revisited:

2003 - J.L. Patton

2006 - E. Rubidge

2008 - W. Hoffmann



Glen Aulin - 29 Sept. to 5 Oct. 1915: "camped on north side of the Tuolumne River at the east end of Glen Aulin, elevation 7800 ft" [T. I. Storer, p. 596]

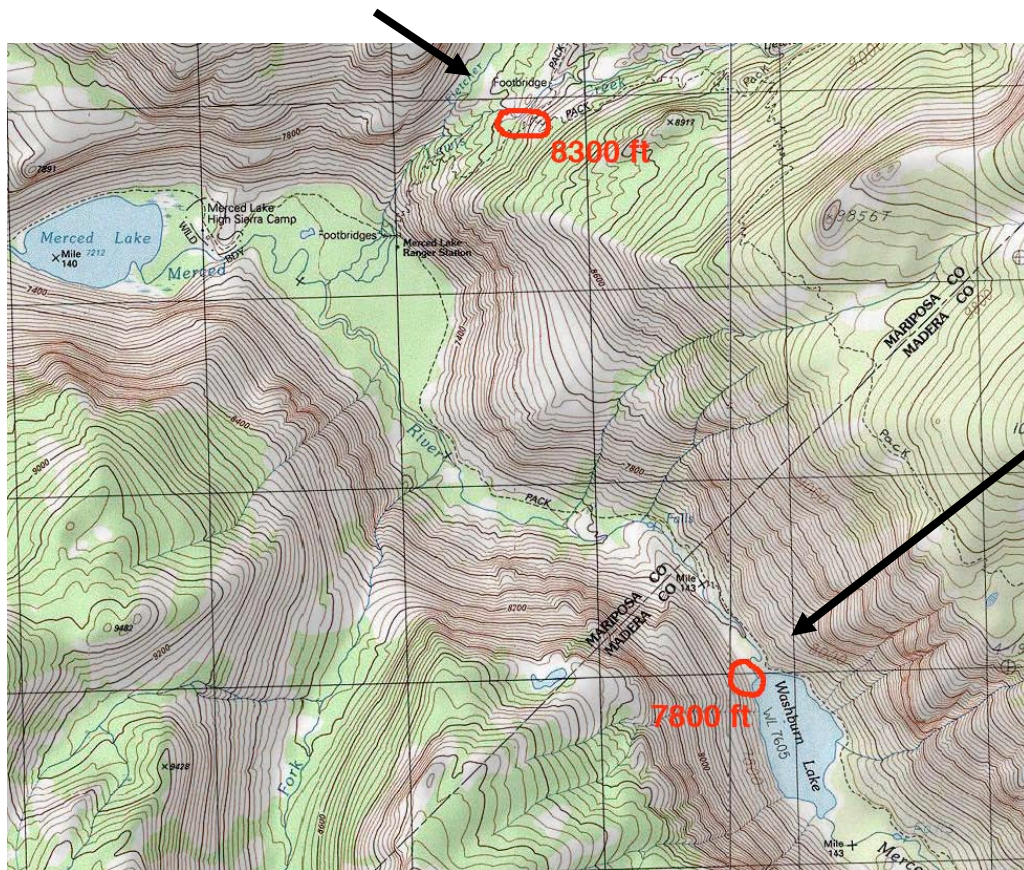
- "Conies were heard bleating at lower end of Glen Aulin in a rock-slide alt. 7700 ft" [W. P. Taylor, p. 2448]
- "mammals heard & seen: **Cony**, 1 (heard in rock slide at about 7650 ft)" [Taylor, p. 2454]
- "On the SE side of McGee Lake I heard a **cony** 'barking' from the rock-slide" [Storer, p. 604]
- "in the rockslides which lie at the base of the canyon wall I found feces of marmot, woodrat, and **cony**. I also heard the call of the latter animal in two different places, but after 'roosting' on the rock piles for over an hour saw nothing of them:" [Storer, p. 608]

26 August 1915 (p.1237)

“8:15 a.m. – Left camp [1 mi E Merced Lake] at 7:15, and am now on the Tuolumne Pass Trail up McClure Fork Canyon [Lewis Creek] at about 8300 ft...

9:15 a.m. – Cony (2 heard in small short talus piles along trail ... surrounded by typical Canadian forest and brush; still directly above a few hundred feet is ... tongue of Hudsonian...

4:20 p.m. – Back down at 8300 ft., where I heard the cony this morning. My ‘squeaking’ brot an answer, and after ten minutes or so, he appeared and I shot him. As usual it fell down into crevices of the rocks... I was unable to ... find the shot animal.”



J. Grinnell fieldnotes

Aug. 1915

pika observations

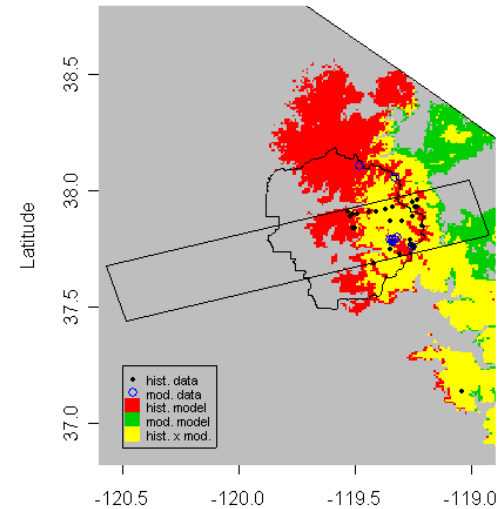
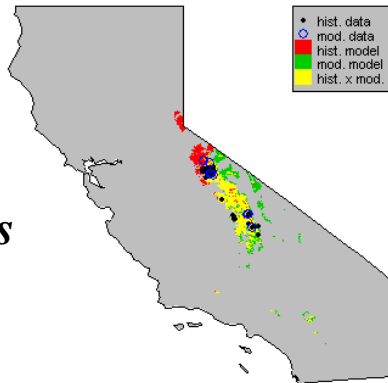
Merced Lake - Washburn Lake

24 August 1915 (p. 1232)

“9:45 am – Cony, heard three, and shot one in mass of boulders on talus immediately north of the lake and not more than 150 feet above its level, that is, elevation of about 7800 ft.! The ... surrounding steep slope is covered between the rocks with masses of chinquapin, *C. cordulatus* and the other Canadian chaparral plants. These particular rocks were lined up along side of a steep flood cone channel on the talus from the north-facing cliff above. Occurrence of conies here so low might be accounted for by the relatively nearness of Hudsonian on either band, and the extension of their associational habitat down these steep slopes.”

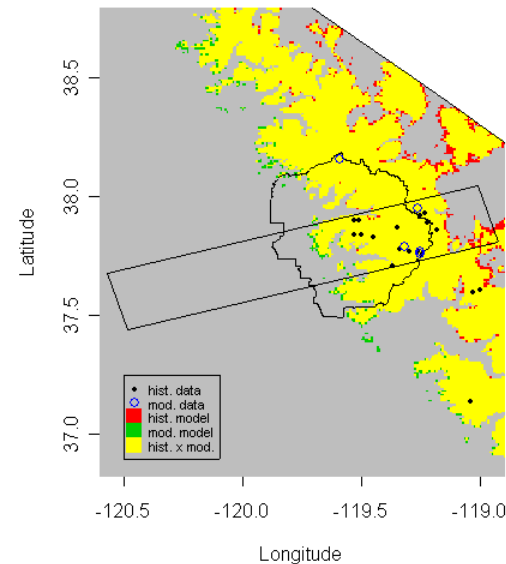
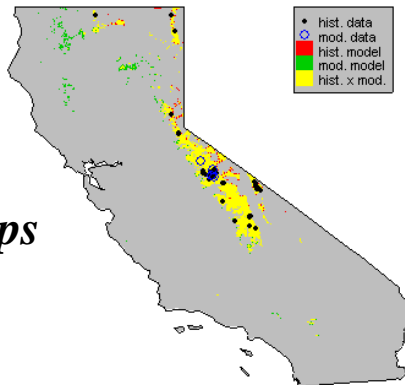
Species distribution modeling [Maxent; historical climate variables]

Tamias alpinus



Range shift
predicted and
observed from
Grinnell era to
present

Ochotona princeps



No
predicted
range shift
from
Grinnell era
to present

Predicted ranges: red + yellow = historic range;
yellow + green = extant range